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Exposure Of Diethylnitrosamine Toxicity On Mice Uterus

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Diethyl nitrosamine (DEN) is a potent carcinogen produce from the metabolism of some drugs and found in tobacco smoke, processed meat, soybean, cheese, and wide variety of foods. It induces oxidative stress, resulting in cytotoxicity, mutagenicity, and carcinogenicity. It's formation can occur only under certain conditions, including strongly acidic conditions such as that of the human stomach. High temperatures, as in frying, can also enhance the formation of nitrosamines. The present investigation was aimed to determine the effect of DEN on histopathological alteration on uterus. Swiss albino mice divided into two group. Each group have three mice. DEN (100 mg/kg i.p.) was administered in 1^{st} group and 2^{nd} group was taken as control. Histopathological examination reveal that control group have ***w***ell maintained endometrium, myometrium and perimetrium. Prominent endocrine glands were noted in the endometrium whereas Exposure of DEN induced Uterine inflammation and characterized by massive thickening of the endometrium and conspicuous narrowing of lumen. In addition, there was sloughing off of the lining endometrial epithelial cells, damage to endometrial glands. The uterus is an essential reproductive organ of a female body, where the zygote implant and the development of embryo occur. DEN cause infertility in the female because the size of the lumen of uterus decrease due to its adverse effect. DEN cause toxicity in the endometrial cells which result in the damaging of the cells, sometimes these cells may convert into cancerous cell, which may cause endometrial cancer.

Keywords: Diethyl nitrosamine, carcinogen, cytotoxicity, mutagenicity, endometrium, myometrium, perimetrium**.**